

ATTORNEY DOCKET NO: CXU-316-CON
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Massia, et al.)	Group Art Unit:	Unknown
Serial No:	Not Yet Assigned)	Examiner:	Unknown
Filed:	Herewith)	Our Account No:	04-1403
Confirmation No:	Not Yet Assigned)	Customer No:	22827
Title:	Polysaccharide-Based Polymerizable Hydrogels)		

Commissioner for Patents
U.S. Patent and Trademark Office
Post Office Box 1450
Alexandria, VA 22313-1450

Sir:

The following is an Information Disclosure Statement for the captioned patent application, pursuant to 37 CFR Sections 1.56, 1.97, and 1.98.

1.[x] Attached hereto is:

- a.[x] A list of materials for consideration per Rule 98(a)(1): 4 page(s)
- b.[x] A legible copy of each patent, publication, or other item listed per Rule 98(1)(2), unless not required per Rule 98 and/or as indicated on the attached list(s):
57 item(s)
- c.[] For each non-English language item listed, pursuant to Rule 98(a)(3), a concise explanation of the relevance thereof as it is presently understood by the individual designated in Rule 56(c) most knowledgeable about the content of such items: _____
[] Such explanation is provided in the Search Report from a corresponding application enclosed herewith along with any enclosed translation into English.

2.[x] This Information Disclosure Statement is being filed [CHECK ONE]:

- a.[x] WITHIN THREE MONTHS of the application filing date, national stage date of entry, or along with or after a request for continued examination, OR BEFORE the mailing date of a first Office Action on the merits, which ever event occurs last, WHEREFORE per Rule 97(b) NO filing fee or Rule 97(e) certificate is required.
- b.[] AFTER the time periods of section 2.a above, but BEFORE a Final Action, Notice of Allowance OR an action that otherwise closes prosecution, WHEREFORE PER Rule 97(c) submitted herewith is [CHECK ONE]:
 - i.[] Certification per Rule 97(e); OR
 - ii.[] Filing Fee per Rule 17(p)\$180.00
- c.[] AFTER a Final Action OR Notice of Allowance, but BEFORE payment of the issue fee, WHEREFORE per Rule 97(d) submitted herewith is:
 - i. Certification per Rule 97(e); AND
 - ii. Filing fee per Rule 17(p)\$180.00

3.[] Rule 97(e) Certification; per Rule 97(e), the undersigned certifying party make the following certification statement [CHECK ONE]:

- a.[] That each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement; OR
- b.[] That no item of information contained in this Information Disclosure Statement was cited in a foreign patent office in a counterpart foreign application and to the knowledge of the undersigned after making a reasonable inquiry, was known to any individual designated in Rule 56(c) more than three months prior to the filing of this statement.

CERTIFYING PARTY (if different from bottom signature; omission here indicates that certification is being made by signer per signature below).

Name: _____
Address: _____

Signature: _____
Date: _____

4.[x] DEPOSIT ACCOUNT AUTHORIZATION: The Commissioner is hereby authorized to charge any fee specifically authorized hereafter, or any fees in addition to the fee(s) filed, or asserted to be filed, or which should have been filed herewith or concerning any paper filed hereafter, and which may be required under Rules 16-18 (deficiency only) now or hereafter relative to this application and the resulting official document under Rule 20, or credit any overpayment, to our Account No. shown in the heading hereof for which purpose a duplicate copy of this sheet is attached. This statement does not authorize charge of the issue fee in this case.

5.[x] CERTIFICATE OF MAILING: This Information Disclosure Statement is being filed pursuant to [CHECK AND COMPLETE ONE]:


a.[x] First Class Mail Certificate of Mailing under Rule 8:

I hereby certify that this correspondence and any referenced attachment and/or fee are being deposited with the United States Postal Service as first class mail in an envelope addressed to the:

Commissioner for Patents
U.S. Patent and Trademark Office
Post Office Box 1450
Alexandria, VA 22313-1450

on March 25, 2004.

Sandra S. Perkins
(Typed/printed name of person mailing paper or fee)


(Signature of person mailing paper or fee)

b.[] "Express Mail" Certificate under Rule 10:

"Express Mail" – Label No. _____
Date of Deposit _____

I hereby certify that this paper and all attachments and any fee are being deposited with the U.S. Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the:

Commissioner for Patents
U.S. Patent and Trademark Office
Post Office Box 1450
Alexandria, VA 22313-1450.

(Typed/printed name of person mailing paper or fee)

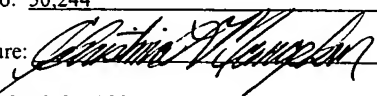
(Signature of person mailing paper or fee)

ADDRESS:
Post Office Box 1449
Greenville, SC 29602 USA
Customer ID No.: 22827
Telephone: 864-271-1592
Facsimile: 864-233-7342

DORITY & MANNING, ATTORNEYS AT LAW, P.A.

By: Christina L. Mangelsen, Patent Agent

Reg. No: 50,244

Signature: 

Date: March 25, 2004

(Rev. 5/92) Information Disclosure Statement List By Applicant(s) Under 37 CFR Section 1.98(a) (1) (Use several sheets if necessary)	Attorney Docket Number:	Serial Number:
	CXU-316-CON	Not Yet Assigned
	Applicant:	
	Stephen Massia, et al.	
	Filing Date:	Group Art Unit:
	Herewith	Unknown
	Confirmation No:	
	Not Yet Assigned	

- NOTE: If no indication is made in the column marked "COPY NOTE," the required legible copy of the corresponding item is submitted herewith; otherwise, a copy is not required and/or not submitted, for the following reason(s) [corresponding reason number is listed in "COPY NOTE" column]
- (1) This item is cumulative, per Rule 98(c)
 - (2) A copy of this item was previously cited by or submitted to the U.S. Patent and Trademark Office in:
 - USSN 10/095/722, filed 03/12/2002, or
 - USSN _____, filed _____;
 Relied on under 35 U.S.C. Section 120, per Rule 98(d)
 - (3) Both reasons (1) and (2) apply
 - (4) No legible complete copy is possessed, in custody of controlled, or readily available
 - (5) Per the U.S. Patent and Trademark Office's waiver of Rule 98(a)(2)(i), the item is a U.S. patent or patent application publication, and the present application was filed after June 30, 2003.

U.S. PATENT DOCUMENTS										
EXAMINER INITIALS	PATENTEE NAME	PATENT NUMBER							ISSUE DATE	COPY NOTE
	della Valle, et al	4	9	5	7	7	4	4	09/1990	2
	Slepian, et al	5	2	1	3	5	8	0	05/1993	2
	Hubbell, et al	5	4	1	0	0	1	6	04/1995	2
	Matsuda, et al	5	4	6	2	9	7	6	10/1995	2
	Matsuda, et al	5	5	9	3	8	1	4	01/1997	2
	Roth, et al	5	6	6	5	0	6	3	09/1997	2
	Matsuda, et al	5	7	6	3	5	0	4	06/1998	2
	Valentini, et al.	5	9	3	9	3	2	3	08/1999	2
	Sawhney, et al.	6	0	8	3	5	2	4	07/2000	2
	Chudzik, et al.	6	4	1	0	0	4	4	06/2002	2
	Massia, et al.	6	5	8	6	4	9	3	07/2003	2

FOREIGN PATENT DOCUMENTS														
EXAMINER INITIALS		COUNTRY	DOCUMENT NUMBER							PUBLICATION DATE	TRANSLATION			COPY NOTE
											YES	NO	N/A	
		WO	8	7	0	7	8	9	8	12/30/1987			X	2
		WO	9	0	0	6	7	6	7	06/28/1990			X	2

*"NO" means that no copy of an English language translation is within the possession, custody, or control of, or is readily available to any individual designated in Rule 56(c).

EXAMINER INITIALS	OTHER DOCUMENTS		COPY NOTE
	Specify author (if any), Title, Pertinent Pages, Date & Place of Publication		
	Moghaddam & Matsuda, "Molecular Design of Three-Dimensional Artificial Extracellular Matrix: Photosensitive Polymers Containing Cell Adhesive Peptide," <i>J. Polymer Science</i> , Vol. 31, pp. 1589-1597	1993, United States	2
	Matsuda et al, "Photoinduced Prevention of Tissue Adhesion," <i>ASAIJ Journal</i> , 1992, pp. M154-M157	1992, United States	2

(Rev. 5/92) Information Disclosure Statement List By Applicant(s) Under 37 CFR Section 1.98(a) (1) (Use several sheets if necessary)	Attorney Docket Number: CXU-316-CON	Serial Number: Not Yet Assigned
	Applicant: Stephen Massia, et al.	
	Filing Date: Herewith Confirmation No: Not Yet Assigned	Group Art Unit: Unknown

	Kito et al, "Differentiated Biocompatible Design of Luminal and Outer Graft Surfaces," "Photocurable Extracellular Matrices, Fabrication, and Cellular Response," <i>ASAIO Journal</i> , 1993, pp. M506-M509	1993, United States	2
	Yong et al, "Facile and Efficient Guanylation of Amines using Thioureas and Mukaiyama's Reagent," <i>J Org. Chem.</i> , 1997, 62, pp. 1540-1542	1997, United States	2
	Tomihata and Ikada, "Crosslinking of hyaluronic acid with water-soluble carbodiimide," <i>J. Biomed. Mater. Res.</i> , Vol. 37, pp. 243-251	1997, United States	2
	Thermes et al, "Mucoadhesion of Copolymers and Mixtures Containing Polyacrylic Acid," <i>Pharmaceutical Research</i> , Vol. 9, pp. 1563-1567	Nov. 12, 1992, United States	2
	McCormick and Lin, "Water-soluble Copolymers. II. Synthesis and Characterization of Model Dextran-g-Acrylamides by Ce(IV)/HNO ₃ -Induced Initiation," <i>J. Macromol. Sci.-Chem.</i> , A16(8) pp. 1441-1462	1981, United States	2
	Hill-West et al, "Inhibition of thrombosis and intimal thickening by <i>in situ</i> photopolymerization of thin hydrogel barriers," <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 91, pp. 5967-5971	June, 1994 United States	2
	Dumanian et al, "A New Photopolymerizable Blood Vessel Glue that Seals Human Vessel Anastomoses Without Augmenting Thrombogenicity," <i>Plast. Reconstr. Surg.</i> 95: pp. 901-907	1995, United States	2
	West and Hubbell, "Comparison of covalently and physically cross-linked polyethylene glycol-based hydrogels for the prevention of postoperative adhesions in a rat model," <i>Biomaterials</i> 1995, Vol. 16, No. 15, pp. 1153-1156	1995, United States	2
	Hern and Hubbell, "Incorporation of adhesion peptides into nonadhesive hydrogels useful for tissue resurfacing," <i>J. Biomed. Mater. Res.</i> , Vol. 39, pp. 266-276	1998, United States	2
	Guschin, "Manual Manufacturing of Oligonucleotide, DNA, and Protein Microchips," <i>Analytical Biochemistry</i> , Vol. 250, pp. 203-211	1997, United States	2
	Lyubimova et al, "Photopolymerization of polyacrylamide gels with methylene blue," <i>Electrophoresis</i> , Vol. 14, pp. 40-50	1993, Germany	2
	Bellobono et al, "Photochemical conjugation and mammalian cells to polymeric supports and membranes: A kinetic study," <i>J. of Biomed. Mater. Res.</i> , Vol. 28, pp. 1157-1163	1994, United States	2
	Hill-West et al, "Efficacy of a resorbable hydrogel barrier, oxidized regenerated cellulose, and hyaluronic acid in the prevention of ovarian adhesions in a rabbit model," <i>Fertility and Sterility</i> , Vol. 62, No. 3, pp. 630-634	September, 1994; United States	2
	Santin et al, "Synthesis and characterization of a new interpenetrated poly (2-hydroxyethylmethacrylate)—gelatin composite polymer," <i>Biomaterials</i> , Vol. 17, pp. 1459-1467	1996, Great Britain	2
	Pol, et al, "In vivo testing of crosslinked polyethers. I. Tissue reactions and biodegradation," <i>J. Biomed. Mater. Res.</i> , Vol. 32, pp. 307-320	1996, United States	2

(Rev. 5/92) Information Disclosure Statement List By Applicant(s) Under 37 CFR Section 1.98(a) (1) (Use several sheets if necessary)	Attorney Docket Number:	Serial Number:
	CXU-316-CON	Not Yet Assigned
	Applicant:	
	Stephen Massia, et al.	
	Filing Date:	Group Art Unit:
	Herewith	Unknown
	Confirmation No:	
	Not Yet Assigned	

	Pol et al, "In vivo testing of crosslinked polyethers. II. Weight loss, IR analysis, and swelling behavior after implantation," <i>J. Biomed. Matrs. Res.</i> , Vol. 32, pp. 321-331	1996, United States	2
	Sanchez-Chaaves and Arranz, "Preparation of dextran-bioactive compound adducts by the direct esterification of dextran with bioactive carboxylic acids," <i>Polymer</i> , Vol. 38, No. 10, pp. 2501-2505	1997, Great Britain	2
	Giammona et al., "A Hydrogel Based on a Polyaspartamide: Characterization and Evaluation of In-vivo Biocompatibility and Drug Release in the Rat," <i>J. Pharm. Pharmacol.</i> , Vol. 49, pp. 1051-1056	1997, United States	2
	Abatangelo, et al, "Biocompatibility and enzymatic degradation studies on sulphated hyaluronic acid derivatives," <i>Biomaterials</i> , Vol. 18, No. 21, pp. 1411-1415	1997, Great Britain	2
	Payan, et al, "Hyaluronidase Degradation of Hyaluronic Acid From Different Sources: Influence of the Hydrolysis Conditions on the Production and the Relative Proportions of Tetra- and Hexasaccharide Produced," <i>Int. J. Biochem.</i> , Vol. 25, No. 3, pp. 325-329	1993, Great Britain	2
	Cohen, et al, "Novel Approaches to Controlled-Release Antigen Delivery," <i>Intl. J. of Tech. Assess. in Health Care</i> , Vol. 10, No. 1, pp. 121-130	1994, United States	2
	Cheng, et al, "Development of an Azopolymer Based Colonic Release Capsule for Delivering Proteins/Macromolecules," <i>Meth. Find Exp. Clin. Pharmacol.</i> , Vol. 16, No. 4, pp. 271-278	1994, United States	2
	Zhong et al, "Biodegradation of hyaluronic acid derivatives by hyaluronidase," <i>Biomaterials</i> , Vol. 15, No. 5, pp. 359-365	1994, United States	2
	Fink and Lengfelder, "Hyaluronic Acid Degradation by Ascorbic Acid and Influence of Iron," <i>Free Rad. Res. Comms.</i> , Vol 3, No. 1-5, pp. 85-92	1987, Great Britain	2
	Dickinson et al, "Biodegradation of a poly(α -amino acid) hydrogel. I. In vivo," <i>J. Biomed. Matrs. Res.</i> , Vol. 15, pp. 577-589	1981, United States	2
	West et al, "Angiogenesis Induced by Degradation Products of Hyaluronic Acid," <i>Science</i> , Vol. 228, pp. 1324-1326	1985, United States	2
	Teijón et al, "Cytarabine trapping in poly (2-hydroxyethyl methacrylate) hydrogels: drug delivery studies," <i>Biomaterials</i> , Vol. 18, No. 5, pp. 383-388	1997, United States	2
	Kito et al, "Biocompatible coatings for luminal and outer surfaces of small-caliber artificial grafts," <i>J. Biomed. Matrs. Res.</i> , Vol. 30, pp. 321-330	1996, United States	2
	van Dijk-Wolthuis et al, "Synthesis, Characterization, and Polymerization of Glycidyl Methacrylate Derivatized Dextran," <i>Macromolecules</i> , Vol. 28, pp. 6317-6322	1995, United States	2
	van Dijk-Wolthuis et al, "Degradation and Release Behavior of Dextran-Based Hydrogels," <i>Macromolecules</i> , Vol. 30, pp. 4639-4645	1997, United States	2
	Vercruysse et al, "Synthesis and in Vitro Degradation of New Polyvalent Hydrazide Cross-Linked Hydrogels of Hyaluronic Acid," <i>Bioconjugate Chem.</i> , Vol. 8, pp. 686-694	1997, United States	2

(Rev. 5/92) Information Disclosure Statement List By Applicant(s) Under 37 CFR Section 1.98(a) (1) (Use several sheets if necessary)	Attorney Docket Number: CXU-316-CON	Serial Number: Not Yet Assigned
	Applicant: Stephen Massia, et al.	
	Filing Date: Herewith Confirmation No: Not Yet Assigned	Group Art Unit: Unknown

	Pangburn and Roskos, "Development of enzymatically degradable protective coatings for use in triggered drug delivery systems: derivatized starch hydrogels," <i>Biomaterials</i> , Vol. 11, pp. 345-350	July, 1990, United States	2
	Matsuda, et al, "Newly Designed Tissue Adhesion Prevention Technology Based on Photocurable Mucopolysaccharides," <i>ASAIO Journal</i> , Vol. 39, pp. M327-M331	1993, United States	2
	Sawhney et al, "Interfacial photopolymerization of poly(ethylene glycol)-based hydrogels upon alginate-poly(L-lysine) microcapsules for enhanced biocompatibility," <i>Biomaterials</i> , Vol. 14, No. 13, pp. 1008-1016	1993, United States	2
	Hossainy and Hubbell, "Molecular weight dependence of calcification of polyethylene glycol hydrogels," <i>Biomaterials</i> , Vol. 15, No. 11, pp. 921-925	1994, United States	2
	Ghandehari et al, "In vitro degradation of pH-sensitive hydrogels containing aromatic azo bonds," <i>Biomaterials</i> , Vol. 18, No. 12, pp. 861-872	1997, United States	2
	von Recum et al, "Degradation of polydispersed poly(L-lactic acid) to modulate lactic acid release," <i>Biomaterials</i> , Vol. 16, No. 6, pp. 441-446	1995, United States	2
	Dickinson and Hiltner, "Biodegradation of a poly-(α -amino acid) hydrogel. II. In vitro," <i>J. Biomed. Mater. Res.</i> , Vol. 15, pp. 591-603	1981, United States	2
	Hong et al, "Biodegradation in vitro and retention in the rabbit eye of crosslinked poly(1-vinyl-2-pyrrolidinone) hydrogel as a vitreous substitute," <i>J. Biomed. Mater. Res.</i> , Vol. 39, pp. 650-659	1998, United States	2
	Sawhney et al, "Bioerodible Hydrogels Based on Photopolymerized Poly(ethylene glycol)-co-poly(α -hydroxy acid) Diacrylate Macromers," <i>Macromolecules</i> , Vol. 26, pp. 581-587	1993, United States	2
	Kurisawa et al, "Double-stimuli-responsive degradation of hydrogels consisting of oligopeptide-terminated poly(ethylene glycol) and dextran with an interpenetrating polymer network," <i>J. Biomater. Sci. Polymer Edn.</i> , Vol. 8, No. 9, pp. 691-708	1997, United States	2
	ISA/US, International Search Report, PCT/US02/07320, 2 pages	Washington, DC 07/15/02	2
EXAMINER		DATE CONSIDERED	
Examiner: initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include a copy of this form with the next communication to applicant.			